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TRANSMITTAL OF APPEAL BRIEF (Small Entity)	Docket No. GENP:101_US_

In Re Application Of: Richard C. Payne

[STAMP: GIPE JUN 05 2006 PATENT AND TRADEMARK OFFICE]

Application No. 09/893,633	Filing Date 06/27/2001	Examiner Clement B. Graham	Customer No. 24041	Group Art Unit 3628	Confirmation No. 5630

Invention: **COMPUTER BASED SYSTEM FOR VALUING AND HEDGING CUSTOMIZED INDEXED CALL OPTION**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

April 6, 2006

❑   Applicant claims small entity status. See 37 CFR 1.27

The fee for filing this Appeal Brief is: **$250.00**

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Dated: **June 1, 2006**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Patent Application No.: 09/893,633   Confirmation No.: 5630

Appellant(s):   PAYNE, Richard C.

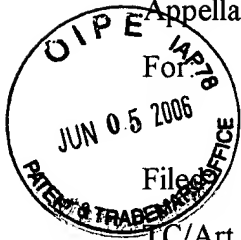For: **COMPUTER BASED SYSTEM FOR VALUING AND HEDGING CUSTOMIZED INDEXED CALL OPTION**

Filed: June 27, 2001

TC/Art Unit: 3628

Examiner: GRAHAM, Clement B.

Docket No.:   GENP:101_US_

Customer No.:24041

BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Honorable Sir:

Appellant respectfully appeals the decision of the Primary Examiner to finally reject Claims 1-23, as set forth in the Final Office Action dated January 31, 2006.

A **Claims Appendix** follows Page 15 of this paper.

An **Evidence Appendix** follows Page 19 of this paper.

A **Related Proceedings Appendix** follows Page 20 of this paper.

REAL PARTY IN INTEREST

The real party in interest is Genesis Financial Products, Inc., Assignee of the above application by assignment recorded in the Patent and Trademark Office at Reel 012349, Frame 0860.

RELATED APPEALS AND INTERFERENCES

Upon information and belief, no appeals or interferences are known to Appellant, which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-23 are currently subject to examination.

Claims 1-23 stand as finally rejected.

Claims 1-23 are the subject of this Appeal.

STATUS OF AMENDMENTS

There are no amendments filed subsequent to final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates generally to financial products, more specifically to computer-based systems for pricing and valuing financial products, and, even more particularly, to computer-based systems for valuing a customized indexed call option.

Claim 1

Claim 1 recites a computer-based method for determining a value of a customized indexed call option. *See generally* Page 4, Paragraph [0013], Lines 10-12; *also* Paragraph [0014] – [0020]. The method includes searching a data structure based on search criterion to determine at least one intermediate value of the customized indexed call option. *See generally* Page 12, Paragraph [0036], Lines 5-9. The method also includes interpolating in the at least one intermediate value of the customized indexed call option based on a set of predetermined parameters of the customized

indexed call option to find the value. *See generally* Page 13, Paragraphs [0040] and [0041] and Page 17.

Claim 4

Claim 4 recites an article of manufacture having a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts $n0$ and $n1$ at specified intervals within the term such that $n0 \geq 0$, $n1 \geq 0$, and $n0 + n1 \leq n$, while guaranteeing nonnegative total credited interest over the term. *See generally* Page 4, Paragraph [0014], Lines 13-17. The interest credited on the notional amount $n0$ is based upon an arbitrary but specified nonzero interest rate. The interest on the notional amount $n1$ is credited based on changes in a specified index. *See generally* Page 4, Paragraph [0014], Lines 17-20.

Claim 5

Claim 5 recites an article of manufacture having a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts n_i at specified intervals within the term such that i is an integer such that $0 \leq i \leq k$, $n_i \geq 0$, and $\Sigma n_i \leq n$, while guaranteeing nonnegative total credited interest over the term. *See generally* Page 4, Paragraph [0014], Lines 13-17. The interest credited on the notional amount n_0 is based upon an arbitrary but specified nonzero interest rate. The interest on the notional amount n_i, i ≥ 1, is credited based on changes in specified index i, where k, the number of specified indices, is an integer greater than or equal to one. *See generally* Page 4, Paragraph [0014], Lines 17-20.

Claim 6

Claim 6 recites a computer-based method for determining a value of a customized indexed annuity with guaranteed return amount G. The computer-based method includes determining a value of a customized indexed call option. *See generally* Page 11, Paragraph [0033], Lines 14-16. The computer-based method also includes determining a present value of the guaranteed return amount G. *See generally* Page 13, Paragraph [0040], Lines 2-5.

Claim 7

Claim 7 recites a computer-based method for determining a value of a customized indexed certificate of deposit with guaranteed return amount G. The computer-based method includes

determining a value of a customized indexed call option. *See generally* Page 11, Paragraph [0033]-[0034], Lines 14-22. The computer-based method also includes determining a present value of the guaranteed return amount G. *See generally* Page 13, Paragraph [0040], Lines 2-5.

Claim 8

Claim 8 recites a computer-based method for determining a value of a customized indexed life insurance policy with guaranteed return amount G. The computer-based method includes determining a value of a customized indexed call option. *See generally* Page 11, Paragraph [0033]-[0034], Lines 14-22. The computer-based method also includes determining a present value of the guaranteed return amount G. *See generally* Page 13, Paragraph [0040], Lines 2-5.

Claim 9

Claim 9 recites a computer-based method for determining a value of a customized indexed bond with guaranteed return amount G. The computer-based method includes determining a value of a customized indexed call option. *See generally* Page 11, Paragraph [0033]-[0034], Lines 14-22. The computer-based method also includes determining a present value of the guaranteed return amount G. *See generally* Page 11, Paragraph [0040], Lines 2-5.

Claim 10

Claim 10 recites a computer-based method for determining a value of a customized indexed call option. The computer-based method includes generating a first sample of index paths based on a first set of predetermined parameters. *See generally* Page 11, Paragraph [0032], Lines 10-12; *also* Page 34, Paragraph [0101]. The computer-based method also includes determining an optimal choice boundary maximizing an intermediate value of the customized indexed call option for such first sample of index paths. The computer-based method also includes determining the value of the customized indexed call option from the determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters. *See* Page 35, Paragraph [0103], Lines 1-8; Page 38, Paragraph [0113], Lines 20-23; Page 39, Paragraph [0113], Lines 1-14.

Claim 17

Claim 17 recites an apparatus for determining a value of a customized indexed call option. The apparatus includes a means for searching a data structure based on a search criterion to

determine at least one intermediate value of said customized indexed call option. The apparatus also includes a means for interpolating in the at least one intermediate value of the customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find the value. Claim 17 is an apparatus claim embodying the method steps recited in Claim 1. Therefore, the description of Claim 1 *supra* is applicable to Claim 17. Also, *see generally* the computer program on compact disc in ASCII text files, created on June 22, 2001 and submitted with the application.

Claim 20

Claim 20 recites an apparatus for determining a value of a customized indexed call option. The apparatus includes a means for generating a first sample of index paths based on a first set of predetermined parameters. The apparatus also includes a means for determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths. The apparatus also includes a means for determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters. Claim 20 is an apparatus claim embodying the method steps recited in Claim 10. Therefore, the description of Claim 10 *supra* is applicable to Claim 20. Also, *see generally* the computer program on compact disc in ASCII text files, created on June 22, 2001 and submitted with the application.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Whether Claims 1-23 are novel under 35 U.S.C. § 102(e) and therefore patentable over U.S. Pub. No. 2002/0099640 (Lange)?

ARGUMENT

1) Whether Claims 1-23 are novel under 35 U.S.C. § 102(e) and therefore patentable over U.S. Pub. No. 2002/0099640 (Lange)?

a)   Summary of the Rejection:

The Primary Examiner rejected Claims 1-23 under 35 U.S.C. § 102(e) as being anticipated by U.S. Pub. No. 2002/0099640 (Lange). More specifically, the Primary Examiner asserted each and every claim is anticipated generally by the abstract of Lange and paragraphs [0037], [0528], [0687], [0815] and [0987].

b)   Brief description of the reference cited by the Primary Examiner

The reference cited by the Primary Examiner is U.S. Pub. No. 2002/0099640 (Lange). Lange discloses a method and system for trading and investing in groups of demand-based adjustable return ("DBAR") contingent claims, including digital options, and for establishing markets and exchanges for such claims.

c)   Arguments regarding Claims 1-23 in general

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Fdn. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, *i.e.*, identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

For each of Claims 1-23, the Primary Examiner listed all or portions of the limitations of the respective claim and then cited the Abstract and the same five paragraphs from Lange. In all cases the Primary Examiner failed to provide any specific rationale or evidence linking the citations from Lange with the respective claim limitations. In fact, the Primary Examiner failed to provide any reasoning or evidence. Instead, the Primary Examiner merely stated: "Note abstract and see paragraph 0815, 0987, 0037, 0528, and 0687." As shown *infra*, Lange does not expressly describe the limitations of Claims 1-23. In fact, Lange's invention is irrelevant to the instant invention. That is, Lange is concerned with and describes a completely different process.

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In the "Response to Arguments" section of the January 31, 2006 Final Office Action, the Primary Examiner asserted that Lange inherently teaches the instant invention. Specifically, the Primary Examiner replicated the rejection in Section 3 of the Office Action and stated: "Therefore, it is inherently clear that these limitation (sic) were addressed within the teachings of Lange." That is, the Primary Examiner has asserted that Lange inherently teaches the limitations of Claims 1-23. However, the Primary Examiner has failed to provide the necessary rationale or evidence of inherency. "In relying upon the theory of inherency, the Primary Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). MPEP Section 2112 IV. The Primary Examiner merely copied the respective claim limitations and pointed to the Abstract and the five paragraphs. No reasoning, support, or rationale is given for these sweeping assertions.

The Primary Examiner's arguments regarding Claim 1 are listed *infra* to illustrate the lack of rationale or evidence in the arguments. In the interest of brevity, the Primary Examiner's arguments regarding the remaining claims are not listed. However, the arguments for the remaining claims demonstrate the same lack of rationale or evidence shown in the argument for Claim 1:

> "As per claim 1, Lange discloses a computer-based method for determining a value of a customized indexed call option, comprising: a) searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option (see paragraph 0815, 0987, 0037, 0528 and 0687) and b) interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value. (Note abstract and see paragraph 0815, 0987, 0037, 0528 and 0687)."

d)   Arguments regarding the rejection of Claim 1

1)   Lange does not teach searching a data structure based on a search criterion to determine at least one intermediate value of a customized indexed call option

Claim 1 of Appellant's application recites: "searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option." The

Primary Examiner has cited paragraphs [0815], [0987], [0037], [0528], and [0687] in Lange as evidence that Lange teaches the above limitation. Appellant has searched in vain for some correlation of Lange with Claim 1 in particular and the instant invention in general. Therefore, Appellant has summarized the teachings of each citation from Lange to show that the teachings are inapplicable to Claim 1 in particular, and the instant invention in general, as follows:

Paragraph [0815] teaches computation of a trade position for a digital option trader: "process 414 determines whether the trader has sufficient equity capital in his account by comparing the computed CAR value and the trader's equity in accordance with the exchange's margin rules. In preferred embodiments, the exchange requires that all traders maintain a level of equity capital equal to some portion or multiple of the CAR value for their portfolios." (Paragraph [0815], lines 8-14). The trade position taught by Lange is irrelevant to the above limitation.

Paragraphs [0987] teaches allowing traders to select payments of digital options according to desired states and to then enter a buy order for the option: "In preferred embodiments of the systems and methods of the present invention for investing and trading in groups of DBAR contingent claims, traders may generate their own desired distributions of payouts, i.e., payouts can be customized very readily by varying amounts invested across the distribution of defined states." (Paragraph [0987], lines 1-7). Lange is teaching a process for generating and replicating arbitrary payout distributions, as evidenced by the header of paragraph [0986]. The payout distribution taught by Lange is irrelevant to the above limitation.

Paragraphs [0037], [0528], and [0687] teach digital options. For example, paragraph [0037] is a general teaching regarding contingent claims, specifically, digital call options. Digital call options are taught as having well-known and standard features, such as strike prices. Nothing in this paragraph addresses the above claim limitation.

Paragraph [0528] teaches the arbitrary distribution of payouts and mechanisms for executing such payouts. Nothing in this paragraph addresses the above claim limitation.

Paragraph [0687] introduces digital options. Nothing in this paragraph addresses the above claim limitation.

Lange is silent regarding searching a data structure based on a search criterion to determine at least one intermediate value of a customized indexed call option.

2)   <u>Lange does not teach interpolation</u>

Claim 1 recites: "interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value." The Primary Examiner has cited the Abstract and paragraphs [0815], [0987], [0037], [0528], and [0687] in Lange as evidence that Lange teaches the above limitation. Appellant has shown that Lange does not teach an intermediate value. Therefore, Lange cannot teach the above claim limitation. Further, Appellant addresses each paragraph as follows (for the sake of brevity, text excerpts are omitted from the paragraph summaries *infra*):

Paragraph [0815] teaches computation of a <u>trade position</u> for a digital option trader as shown in the arguments *supra*. <u>The trade position taught by Lange is irrelevant to the above limitation</u>.

Paragraphs [0987] teaches allowing traders to select payments of digital options according to desired states and to then enter a buy order for the option as shown in the arguments *supra*. Lange is teaching a process for generating and replicating arbitrary payout distributions, as evidenced by the header of paragraph [0986]. <u>The payout distribution taught by Lange is irrelevant to the above limitation</u>.

Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR:

"This invention provides methods and systems for trading and investing in groups of demand-based adjustable return ("DBAR") contingent claims, including digital options, and for establishing markets and exchanges for such claims. The advantages of the present invention, as applied to the establishment and operation of a DBAR digital options exchange, include the ability to offer investments whose profit and loss scenarios are comparable to those for digital options or other derivatives in traditional securities markets, without the need for options or derivatives sellers or order-matching of conventional markets. A DBAR digital options exchange of the present invention can also offer conditional investments, or limit orders, in which an investment in a state of a DBAR

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contingent claim (such as the price of an underlying asset or index) can be executed or withdrawn in response to the implied probability of the occurrence of that state." (Abstract).

The Abstract does not teach the above claim limitation.

Lange is silent regarding interpolation of at least one intermediate value of said customized indexed call option.

Lange fails to expressly or inherently describe any of the elements of Claim 1. Therefore, Claim 1 is novel with respect to Lange.

Further, Lange does not teach, suggest, or motivate each and every limitation of Claim 1 such that the invention of Claim 1 would be rendered obvious to one of ordinary skill in the art at the time the invention was made.

In view thereof, Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claim 1. Claims 2 and 3, dependent from Claim 1, enjoy the same distinction from Lange. Appellant courteously requests that the Board also reverse the Primary Examiner's rejection of Claims 2 and 3.

e)   Arguments regarding the rejection of Claim 4

     1) Lange does not teach a customized indexed call option with a specified term and specified notional amount n.

Claim 4 recites: "a customized indexed call option with a specified term and specified notional amount n..." The Primary Examiner has cited the Abstract and the paragraphs from Lange noted *supra* as evidence that Lange teaches the above limitation. Appellant addresses each citation as follows:

Paragraph [0815] teaches computation of a trade position for a digital option trader as shown in the arguments *supra*. The trade position taught by Lange is irrelevant to the above limitation.

Paragraphs [0987] teaches allowing traders to select payments of digital options according to desired states and to then enter a buy order for the option as shown in the arguments supra. Lange is teaching a process for generating and replicating arbitrary payout distributions, as evidenced by the header of paragraph [0986]. The payout distribution taught by Lange is irrelevant to the above limitation.

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Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR. The Abstract is silent regarding the above claim limitation.

2) Lange does not teach notational amounts

Claim 4 recites: "....operatively arranged to allow an investor to choose notional amounts $n0$ and $n1$ at specified intervals within the term such that $n0{\geq}0$, $n1{\geq}0$, and $n0{+}n1 \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount $n0$ is based upon an arbitrary but specified nonzero interest rate, and interest on the notional amount $n1$ is credited based on changes in a specified index." Lange is silent regarding the specific limitations regarding notional amount n and notional amounts $n0$ and $n1$ at specified intervals within the term such that $n0{\geq}0$, $n1{\geq}0$, and $n0{+}n1 \leq n$.

The Primary Examiner has cited the Abstract and the paragraphs from Lange noted *supra* as evidence that Lange teaches the above limitation. Appellant addresses each citation as follows:

Paragraph [0815]: The trade position taught by Lange is irrelevant to the above limitation.

Paragraphs [0987]: The payout distribution taught by Lange is irrelevant to the above limitation.

Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR. The Abstract is silent regarding the above claim limitation.

Lange fails to expressly or inherently describe any of the elements of Claim 4. Therefore, Claim 4 is novel with respect to Lange.

Further, Lange does not teach, suggest, or motivate each and every limitation of Claim 4 such that the invention of Claim 4 would be rendered obvious to one of ordinary skill in the art at the time the invention was made.

In view thereof, Appellant requests that the Board reverse the Primary Examiner's rejection of Claim 4.

f)   Arguments regarding the rejection of Claim 5

1) Lange does not teach a customized indexed call option with a specified term and specified notional amount n.

Claim 5 recites: "a customized indexed call option with a specified term and specified notional amount n..." Appellant has shown in the arguments for Claim 4 that Lange does not expressly or inherently describe the above claim limitation.

2) Lange does not teach notational amounts

Claim 5 recites: "...operatively arranged to allow an investor to choose notional amounts n_i at specified intervals within the term such that i is an integer such that $0 \leq i \leq k$, $n_i \geq 0$, and $\Sigma n_i \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount n_0 is based upon an arbitrary but specified nonzero interest rate, and interest on the notional amount n_i, $i \geq 1$, is credited based on changes in specified index i, where k, the number of specified indices, is an integer greater than or equal to one."

The Primary Examiner has cited the Abstract and the paragraphs from Lange noted *supra* as evidence that Lange teaches the above limitation. Appellant addresses each citation as follows:

Paragraph [0815]: The trade position taught by Lange is irrelevant to the above limitation.

Paragraphs [0987]: The payout distribution taught by Lange is irrelevant to the above limitation.

Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR. The Abstract is silent regarding the above claim limitation.

Lange fails to disclose any of the elements of Claim 5. Therefore, Claim 5 is novel with respect to Lange.

Further, Lange does not teach, suggest, or motivate each and every limitation of Claim 5 such that the invention of Claim 5 would be rendered obvious to one of ordinary skill in the art at the time the invention was made.

In view thereof, Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claim 5.

g)   Arguments regarding the rejection of Claims 6-9

Claims 6-9 recite: "determining a value of a customized indexed call option;"

In the arguments for Claim 1, Appellant showed that Lange does not teach determining a value of a customized indexed call option.

Claims 6-9 recite: "and determining a present value of the guaranteed return amount G."

The Primary Examiner has cited the Abstract and the paragraphs from Lange noted *supra* as evidence that Lange teaches the above limitation. Appellant addresses each citation as follows:

Paragraph [0815]: The trade position taught by Lange is irrelevant to the above limitation.

Paragraphs [0987]: The payout distribution taught by Lange is irrelevant to the above limitation.

Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR. The Abstract is silent regarding the above claim limitation.

Lange fails to expressly or inherently describe any of the elements of Claims 6-9. Therefore, Claims 6-9 are novel with respect to Lange.

Further, Lange does not teach, suggest, or motivate each and every limitation of Claims 6-9 such that the inventions of Claims 6-9 would be rendered obvious to one of ordinary skill in the art at the time the invention was made.

In view thereof, Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claims 6-9.

h)   Arguments regarding the rejection of Claim 10

Claim 10 recites: "generating a first sample of index paths based on a first set of predetermined parameters; determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths; and determining

said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters."

The Primary Examiner has cited the Abstract and the paragraphs from Lange noted *supra* as evidence that Lange teaches the above limitation. Appellant addresses each citation as follows:

Paragraph [0815]: <u>The trade position taught by Lange is irrelevant to the above limitation</u>.

Paragraphs [0987]: <u>The payout distribution taught by Lange is irrelevant to the above limitation</u>.

Paragraphs [0037], [0528], and [0687] teach digital options as shown in the arguments *supra*. Nothing in these paragraphs addresses the above claim limitation.

In the Abstract, Lange teaches contingent claims and digital options, specifically a DBAR. The Abstract is silent regarding the above claim limitation.

Lange fails to expressly or inherently describe any of the elements of Claim 10. Therefore, Claim 10 is novel with respect to Lange.

Further, Lange does not teach, suggest, or motivate each and every limitation of Claim 10 such that the invention of Claim 10 would be rendered obvious to one of ordinary skill in the art at the time the invention was made.

In view thereof, Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claim 10.

     i)   <u>Arguments regarding the rejection of Claim 17</u>

Claim 17 is an apparatus claim embodying the method steps recited in Claim 1. Appellant has shown that Claim 1 is novel with respect to Lange. Therefore, Claim 17 also is novel with respect to Lange. Claims 18-19, dependent from Claim 17, enjoy the same distinction with respect to Lange. Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claims 17-19.

     j)   <u>Arguments regarding the rejection of Claim 20</u>

Claim 20 is an apparatus claim embodying the method steps recited in Claim 10. Appellant has shown that Claim 10 is novel with respect to Lange. Therefore, Claim 20 also is novel with respect to Lange. Claims 21-23, dependent from Claim 20, enjoy the same distinction with respect

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to Lange. Appellant courteously requests that the Board reverse the Primary Examiner's rejection of Claims 20-23.

CONCLUSION

For the reasons set forth above, Appellant respectfully submits that Claims 1-23 are novel under 35 U.S.C. § 102(e) and therefore patentable over U.S. Publication No. US 2002/0099640 (Lange). Accordingly, Appellant prays that this Honorable Board will reverse the Primary Examiner's rejection of Claims 1-23.

Respectfully submitted,

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Dated: June 1, 2006
CPM/MAR
Attachment

CLAIMS APPENDIX

Reprinted herebelow are the claims involved in this appeal:

1.   A computer-based method for determining a value of a customized indexed call option, comprising:

   a) searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option; and

   b) interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value.

2.   A computer-based method for determining a value of a customized indexed call option as recited in claim 1 wherein said search criterion comprises a set of predetermined parameters of the customized indexed call option.

3.   A computer-based method for determining a value of a customized indexed call option as recited in claim 1 wherein said data structure is initialized based on a second predetermined set of parameters.

4.   An article of manufacture comprising a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts $n0$ and $n1$ at specified intervals within the term such that $n0 >= 0$, $n1 >= 0$, and $n0+n1 \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount $n0$ is based upon an arbitrary but specified nonzero interest rate, and interest on the notional amount $n1$ is credited based on changes in a specified index.

5.   An article of manufacture comprising a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts n_i at specified intervals within the term such that i is an integer such that $0 \leq i \leq k$, $n_i \geq 0$, and $\Sigma n_i \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount n_0 is based upon an arbitrary but specified nonzero interest rate, and

interest on the notional amount n_i, i ≥ 1, is credited based on changes in specified index i, where k, the number of specified indices, is an integer greater than or equal to one.

6.   A computer-based method for determining a value of a customized indexed annuity with guaranteed return amount G, comprising:

    a) determining a value of a customized indexed call option; and

    b) determining a present value of the guaranteed return amount G.

7.   A computer-based method for determining a value of a customized indexed certificate of deposit with guaranteed return amount G, comprising:

    a) determining a value of a customized indexed call option; and

    b) determining a present value of the guaranteed return amount G.

8.   A computer-based method for determining a value of a customized indexed life insurance policy with guaranteed return amount G, comprising:

    a) determining a value of a customized indexed call option; and

    b) determining a present value of the guaranteed return amount G.

9.   A computer-based method for determining a value of a customized indexed bond with guaranteed return amount G, comprising:

    a) determining a value of a customized indexed call option; and

    b) determining a present value of the guaranteed return amount G.

10.   A computer-based method for determining a value of a customized indexed call option, comprising:

    a) generating a first sample of index paths based on a first set of predetermined parameters;

    b) determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths; and

    c) determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters.

11.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are randomly generated from distributions specified by the first set of predetermined parameters.

12.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are quasi-randomly generated from distributions specified by the first set of predetermined parameters.

13.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said first sample of index paths and said second sample of index paths are identical.

14.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said first sample of index paths and said second sample of index paths differ.

15.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are generated for one index.

16.   A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are generated for multiple indices.

17.   An apparatus for determining a value of a customized indexed call option, comprising:

    a) means for searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option; and

    b) means for interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value.

18.   The apparatus recited in Claim 17 wherein said means for searching a data structure comprises a general purpose computer specially programmed to search said data structure based on said search criterion to determine at least one intermediate value of said customized indexed call option.

19.   The apparatus recited in Claim 17 wherein said means for interpolating in said at least one intermediate value of said customized indexed call option comprises a general purpose computer specially programmed to perform said interpolation.

20.   An apparatus for determining a value of a customized indexed call option, comprising:

    a)   means for generating a first sample of index paths based on a first set of predetermined parameters;

    b)   means for determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths; and

    c)   means for determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters.

21.   The apparatus recited in Claim 20 wherein said means for generating a first sample of index paths based on a first set of predetermined parameters comprises a general purpose computer specially programmed to generate said first sample of index paths.

22.   The apparatus recited in Claim 20 wherein said means for determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths comprises a specially programmed general purpose computer.

23.   The apparatus recited in Claim 20 wherein said means for determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters comprises a specially programmed general purpose computer.

EVIDENCE APPENDIX

No evidence is submitted at this time.

RELATED PROCEEDINGS APPENDIX

No related proceedings are submitted at this time.